Installation and Troubleshooting

Welcome to Excalibur Systems suite of boards, cards and modules. This document describes Excalibur hardware and software installation, and troubleshooting and support information.

Introduction 2

CD Contents 2
Supported Carrier Boards, Express Cards and PCMCIA Cards 2
Supported Operating Systems 2
Maximum Modules per Carrier Board 3

Installation Instructions for PCI[e] Boards, Express Cards and PCMCIA Cards 4

Assigning a Unique ID to the Board 4
Installing the Board or Card 4
Verifying Board/Card Installation 5
Installing the *Software Tools* 6
Running a Test Program 8
Multiple Board Support for PCI[e] Boards, Express Cards and PCMCIA Cards 8

Installation Instructions for VME/VXI Boards on PCI-MXI-2 Systems 9

Assigning a Device ID to the Board 9
Installing the Board 10
Installing the *Software Tools* 11
Verifying VME/VXI User Window Size 11
Viewing Global Module Information Registers (for Windows 2000/XP) 12
Multiple Board Support for VME/VXI Boards 12

Installation Instructions for PMC Boards 13

Assigning a Unique ID to the Board 13
Installing a PMC Board on a [c]PCI Carrier Board 14
Installing a PMC Board on a VME Carrier Board under VxWorks 14

Troubleshooting 15

Software Installation Issues 15
General Troubleshooting 16
Contacting Technical Support 16

Introduction

CD Contents

The *Excalibur Installation CD* contains:

- All drivers and support files required for the installation of Excalibur carrier boards, Express cards and PCMCIA cards.
- A setup program to install Excalibur's *Software Tools*.
- The *User's Manual* for your specific hardware and a complete *Programmer's Reference* for your specific set of software drivers.

Note: The *Excalibur Installation CD* you received with your package is the most recent release of the CD as of the date of shipping. Software and documentation updates can be found and downloaded from our website: www.mil-1553.com.

Supported Carrier Boards, Express Cards and PCMCIA Cards

This document describes how to install Excalibur hardware and software for all PCI, PCIe, cPCI, VME, VXI and PMC carrier boards and their modules; Express cards and PCMCIA cards.

For ISA boards running on Windows 9x/ME/NT4, see the installation instructions in the *Programmer's Reference* for your module or board. For ISA boards running on Windows 2000/XP, see the **`ISA KernelDriver support for Windows 2000.txt`** file on the root folder of the *Excalibur Installation CD*.

Supported Operating Systems

This document contains installation instructions for the following Windows operating systems:

- Windows 9x/ME
- Windows NT4
- Windows 2000/XP

Most Excalibur products support all of these operating systems. Each of these groups has a separate kernel driver that is installed automatically when installing the *Software Tools* using the *Excalibur Installation CD*. When upgrading your *Software Tools* from our website, make sure to select the correct kernel driver software for your operating system.

Note: The *EXC-1553PCMCIA/Px* card requires Windows 2000/XP.

Windows Vista Note

Excalibur *Software Tools* are fully compatible with Windows Vista. However, a difficulty may arise when running the **ExcConfig** utility due to Microsoft's new **User Account Control** feature. This feature requires you to specifically request administrative privileges whenever necessary. Administrative privileges are required to run the **ExcConfig** utility due to registry modifications made by the utility.

Therefore, you can no longer run **ExcConfig** by double-clicking on its icon, nor can you run **ExcConfig** by choosing it from the Start menu. Attempting either of these options will result in an error message. Instead, right-click on the icon (or menu item) and choose **Run as administrator**.

Maximum Modules per Carrier Board

The *Software Tools* support the use of multiple modules per carrier board, and multiple carrier boards simultaneously. The following table lists the maximum modules per carrier board:

	EXC-4000PCI[e], EXC-4000cPCI	***EXC-4000VME/VXI***	***EXC-2000PCI***
M4K1553Px	4	8	N/A
M4KMMSI	4	8	N/A
M4K1553MCH	4	8	N/A
M4K429RTx	4	8	2
M4KDiscrete	4	8	2
M4KSerial	4	8	2
M4KH009	2	4	N/A
M4KCAN	4	8	2
M4K708	4	8	2

Note:

- The *EXC-4000P104plus* carrier board supports two removable *M4K* modules, one built-in *M4K429RTx* module and two built-in *M4K1553Px* modules.
- The *EXC-1553ccVME/Px* board comes with up to 16 built-in *M4K1553Px* modules.
- For information on multiple board support, see **Multiple Board Support for PCI[e] Boards, Express Cards and PCMCIA Cards** on page 8 and **Multiple Board Support for VME/VXI Boards** on page 12.

Installation Instructions for PCI[e] Boards, Express Cards and PCMCIA Cards

Warning: *Whenever handling an Excalibur board, make sure to wear a suitably grounded electrostatic discharge (ESD) wrist strap.*

Assigning a Unique ID to the Board

Note: This section does not apply to Express cards and PCMCIA cards. For Express cards and PCMCIA cards, instead of assigning a Unique ID use the Socket Number where the card is inserted.

Each board must be assigned a Unique ID. This information is stored in the Windows System Registry and is used when accessing the board.

Set DIP switch SW1 to a Unique ID by setting the switch contacts *open* (or *off*) to represent logic '1' and *closed* (or *on*) to represent logic '0'.

Set the DIP switch contacts as follows:

For Board ID #:	Set the Contacts as Follows:			
	Contact #1	Contact #2	Contact #3	Contact #4
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
• • •				
15	1	1	1	1

Installing the Board or Card

To install an Excalibur carrier board or card:

1. Do one of the following:
   - For carrier boards: Make sure the computer is turned off. Insert the board into one of the available slots. (For more information see the Installation section in the *User's Manual* for the board you are using.) Start your computer and wait until Windows boots up.
   - For Express cards and PCMCIA cards: Turn on the computer and wait until the operating system boots up. Insert the card into an appropriate slot. When the card is almost all the way in the slot, push firmly but gently, to ensure a firm connection with the computer. **Do not** force the card into position.

2. For Windows operating systems that support "Plug and Play" (9x/ME/2000/XP), a wizard is displayed to help you install your new hardware. When the wizard asks for a disk or CD containing the driver for the board, select the root folder of the CD. The operating system will find the correct file, and install the kernel driver.

Note: If the *EXC-1553ExCARD/Px* is not automatically recognized by Windows when plugged into an ExpressCard slot, open the Windows Device Manager, right-click on any device and select **Scan for hardware changes**.

Note: It is recommended to always insert the *EXC-1553ExCARD/Px* when the computer is off.

Note: Windows NT does not automatically recognize new hardware. For Windows NT, continue with **Installing the Software Tools** on page 6, reboot your computer, then run a test program (see **Running a Test Program** on page 8).

3. If the wizard is not displayed, do the following:
   - For Windows 9x/ME: Right-click **My Computer** and select **Properties**. Click the **Device Manager** tab then double-click **Excalibur PCI** or **PCMCIA Cards**. Double-click the **Excalibur PCI** or **PCMCIA Cards**, click the **Driver** tab, then click **Update Driver**. Follow the **Update Device Driver Wizard**.
   - For Windows 2000/XP: Right-click **My Computer** and select **Properties**. Click the **Hardware tab,** then click **Device Manager**. Double-click **Excalibur PCI** or **PCMCIA Cards**. Right-click the **Excalibur PCI** or **PCMCIA Cards** and select **Update Driver**. Follow the **Hardware Update Wizard**.
4. Insert the *Excalibur Installation CD* in the CD drive and follow the wizard to install the new hardware.

   The board installation is complete.
5. If you are prompted to reboot your computer, reboot now.

Verifying Board/Card Installation

To verify board/card installation:

Note: The following instructions do not apply to Windows NT. For Windows NT, to verify installation install the software (see **Installing the Software Tools** on page 6), reboot your computer, then run a test program (see **Running a Test Program** on page 8).

1. Make sure that the Excalibur board/card is in place in the computer.
2. Right-click **My Computer** and select **Properties**.

   The **System Properties** dialog box is displayed.
3. Do one of the following:
   - For Windows 9x/ME: In the **System Properties** dialog box, click the **Device Manager** tab.
   - For Windows 2000/XP: In the **System Properties** dialog box, click the **Hardware** tab, then click **Device Manager**.
4. Double-click **Excalibur PCI** or **PCMCIA Cards**.

5. Verify that the Excalibur board/card is listed next to a gray diamond-shaped icon.

   If you see a yellow exclamation point (**!**) superimposed on the gray diamond or a yellow question mark (?), this indicates that the board/card is not properly installed. In this case:

   - Verify that there is enough memory available in the system. If not, free up more memory or IRQs.
   - For Windows 9x/ME: Verify that the computer is Plug and Play compatible. Many computers claim to be "Plug and Play" but are not fully compatible with the Plug and Play specification. See step 3 of **Installing the Board or Card** on page 4.

Installing the *Software Tools*

Note: If there is already a previous version of *Software Tools* for the same module/card installed on the computer, the new version will overwrite it. However, the software installation works best on a system that does not have any Excalibur products installed on it. Therefore, it is **strongly** recommended to uninstall the previous version before installing the new version by selecting **Start | Control Panel | Add/Remove Programs** or **Start | Control Panel | Uninstall a program**.

To install the *Software Tools* for your module/card:

If you want to save the earlier version, you can choose to install the new version in a different folder when the **Excalibur InstallShield Wizard** prompts you for an installation location.

1. Insert the *Excalibur Installation CD* in the CD drive.

   The **Excalibur InstallShield Wizard** is displayed.

2. Click the **Software Tools Installation** button.
3. Follow the on-screen instructions to select the software that matches your product.
4. When an Excalibur product is already installed, the following options are displayed:

Option	Description
Modify	When you select **Modify**, the **Excalibur InstallShield Wizard** detects all Excalibur software on your computer and then allows you to install/uninstall additional products from the system. Use this option to install new products, or to uninstall products. Select the items that should remain on the system. Deselect those that you want to remove. **Note:** The Modify option detects only those items installed using this installation program.
Repair	When you select **Repair**, the installation **Excalibur InstallShield Wizard** detects all Excalibur products that are installed, and reinstalls them without any user interaction. Use this option to repair a possibly faulty installation, or to install the latest released version of all currently installed products on top of the currently installed versions on your system. This is especially useful for installing an updated version of the software.
Remove	When an Excalibur product is installed, you can select **Remove** to remove all unmodified Excalibur files from your system. New and modified files remain, and are unaffected.

5. Continue with the **Excalibur InstallShield Wizard**.

6. When the **Excalibur Configuration Utility (ExcConfig)** main screen is displayed, double-click the **Card Type** field. (If the **Excalibur Configuration Utility** is not displayed automatically, select **Start | Programs | Excalibur | ExcConfig Board Setup Utility**.)
7. In the **Excalibur Configuration Wizard**, select the appropriate board/card.
8. Do one of the following:
   - When using more than one carrier board (or card) of the same type, you must select a unique value for each board/card in the **Unique ID** or **Socket Number** field. This number must match the DIP switches of the board or the Socket Number of card. (See **Assigning a Unique ID to the Board** on page 4.) In the remaining fields, leave the **Auto** values and click **Save**. Repeat steps 6–8 for each board/card.
   - When using one carrier board or card, leave all the **Auto** values and click **Save**.

Note:

- Make a note of the row number in the **Excalibur Configuration Utility** assigned to the device. This device number is used as the parameter for the Init_Module function.
- For a PCMCIA card running under Windows NT, you cannot use the **Auto** values. See **PCMCIA Configuration Values for Windows NT** on page 7.

9. Reboot your computer. For Express cards and PCMCIA cards, leave the card in the computer throughout the reboot operation.

   The *Software Tools* are installed.

PCMCIA Configuration Values for Windows NT

For PCMCIA cards under Windows NT, use the following values in the **Excalibur Configuration Wizard**:

Name of Field	Enter the Value
Type	Select the appropriate PCMCIA card.
Memory base	A 72K area of memory To determine which memory areas are available on your computer: Select **Start | Programs | Administrative Tools | Windows NT Diagnostics | Memory**. The memory areas currently in use are displayed. Find a 72K block of unused memory. Type the starting address of the unused block in the **Memory base** field.
Interrupts	To determine which interrupts are available on your computer, select **Start | Programs | Administrative Tools | Windows NT Diagnostics | Resources**. You will see which Interrupt Numbers are currently in use. Find a number that is not in use (often 5 or 7), and type that number into the **Interrupt** field. Sometimes an Interrupt (IRQ) is not listed as “in use”, but is in fact unavailable. You may need to try several IRQs before you find one that is available and allows you to continue working. If you are not using interrupts, it is recommended to leave the Interrupt field undefined.

Running a Test Program

The *Software Tools* for each module/card includes various demo programs to verify that the specific module/card is operating properly. The source code is provided with the demo programs as a guide to develop your own applications using the *Software Tools* for the module/card.

To run a test program:

- Select **Start | Programs | *[Module/Card Name]* | *[Demo Program Icon]***.

Multiple Board Support for PCI[e] Boards, Express Cards and PCMCIA Cards

You can use any combination of up to 16 PCIe, PCI or cPCI boards simultaneously. When using more than one Excalibur board on a single machine, you must:

1. Assign a Unique ID to each board using DIP switch SW1 on the PCI[e] board. See **Assigning a Unique ID to the Board** on page 4. (This step is not applicable to Express cards or PCMCIA cards.)
2. After installing the board, use the **ExcConfig** utility to assign a device number to the board, by associating a device number with the board's Unique ID or Socket Number. (The Socket Number is the slot number in which the Express card or PCMCIA card is located.)

For each board, enter the appropriate values in the **ExcConfig** screen:

Name of Field	Enter the Value
Type	Select *EXC-4000PCI* from the drop-down list.
Unique ID	Enter the Unique ID previously assigned to the board. See **Assigning a Unique ID to the Board** on page 4.
Memory	Accept the default value.
Interrupt Setup	Accept the default value.
I/O ports	Accept the default value.

Note:

- The **ExcConfig** utility is not for use with VME/VXI boards. For multiple VME/VXI boards, see **Multiple Board Support for VME/VXI Boards** on page 12.
- To use more than four boards, you must be using *Software Tools* released on or after September 2007.

Installation Instructions for VME/VXI Boards on PCI-MXI-2 Systems

Warning: *Whenever handling an Excalibur board, make sure to wear a suitably grounded electrostatic discharge (ESD) wrist strap.*

Assigning a Device ID to the Board

This section discusses how to assign a unique logical address to the board, and contains the following sections:

- **Assigning a Device ID to an EXC-4000VME/VXI Board** on page 9
- **Assigning a Device ID to an EXC-1553ccVME/Px Board** on page 10

Assigning a Device ID to an EXC-4000VME/VXI Board

Before installing the board, you must assign a unique logical address to the board using DIP switch SW1. The board requires a 1MB area of memory (within A24 or A32 memory space). Choose a logical address (within A16 memory space) that does not conflict with any other devices in your system. By default, the board is set to the address 80H (128 Dec.).

Warning: *If a logical address is already in use and it is also used for the EXC-4000VME/VXI, the board will not function properly.*

Examples of Logical Address Switch (SW1) Settings:

		MSB			Logical Address Switch (SW1)				LSB
'1'	'1'	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**
A15	A14	A13	A12	A11	A10	A9	A8	A7	A6
Logical Address		**Switch Settings**							
Hex	**Dec**								
1	1	0	0	0	0	0	0	0	1
20	32	0	0	1	0	0	0	0	0
80	128	1	0	0	0	0	0	0	0
81	129	1	0	0	0	0	0	0	1
C0	192	1	1	0	0	0	0	0	0
FF	255	1	1	1	1	1	1	1	1

Example: For a logical address of C0 (H) [=A16 Address F000 (H)], set position 1 and 2 to OFF or Open and all other switches to ON or Closed.

Switch ON or Closed = logic 0 at switch position
Switch OFF or Open = logic 1 at switch position

Note:

- The numbers in the above table under Switch Settings indicate switch positions.
- Address lines A15 and A14 are always decoded as '1'.
- Address lines A5–A0 are always decoded as '0'.

Assigning a Device ID to an EXC-1553ccVME/Px Board

Before installing the board, you must assign a unique logical address to the board using jumpers JP1–JP8. The board requires a 2MB area of memory (within A24 or A32 memory space). Choose a logical address (within A16 memory space) that does not conflict with any other devices in your system. By default, the board is set to the address 80H (128 Dec.).

Warning: *If a logical address is already in use and it is also used for the EXC-1553ccVME/Px, the board will not function properly.*

Examples of Logical Address Jumper (JP1–JP8) Settings:

		MSB		Logical Address Jumpers (JP1–JP8)					LSB
'1'	'1'	**JP1**	**JP2**	**JP3**	**JP4**	**JP5**	**JP6**	**JP7**	**JP8**
A15	A14	A13	A12	A11	A10	A9	A8	A7	A6
Logical Address		**Jumper Settings**							
Hex	**Dec**								
1	1	0	0	0	0	0	0	0	1
20	32	0	0	1	0	0	0	0	0
80	128	1	0	0	0	0	0	0	0
81	129	1	0	0	0	0	0	0	1
C0	192	1	1	0	0	0	0	0	0
FF	255	1	1	1	1	1	1	1	1

Example: For a logical address of C0 (H) [=A16 Address F000 (H)], short jumpers JP3–JP8, and do not short jumpers JP1 and JP2.

Jumper shorted = logic 0
Jumper open = logic 1

Note:

- The numbers in the above table under Switch Settings indicate jumper positions.
- Address lines A15 and A14 are always decoded as '1'.
- Address lines A5–A0 are always decoded as '0'.

Installing the Board

To install a VME/VXI board:

1. Make sure the computer is turned off.
2. Insert the board into one of the available slots.
3. Start your computer and wait until Windows boots up.
4. Ensure the National Instruments PCI-MXI-2 system is installed correctly.
5. Run Resman, the resources manager, to establish a connection to the board.

Note: Earlier versions of the National Instruments PCI-MXI-2 may also require running VXIINIT, the hardware initialization program.

Installing the *Software Tools*

The software installation for VME/VXI boards is the same as for PCI[e] boards. See **Installing the Software Tools** on page 6.

Note: *Software Tools* for VME/VXI boards were written for VISA standard.

Verifying VME/VXI User Window Size

This section discusses how to verify that there is enough memory (user window size) on the VME/VXI machine for the board (8 MB), and contains the following sections:

- **Verifying User Window Size for Windows 9x** on page 11
- **Verifying User Window Size for Windows NT/2000/XP** on page 11

Note: If there is not enough memory, the board may not work properly.

Verifying User Window Size for Windows 9x

To verify user window size for Windows 9x:

1. Install NI-VXI VISA for PCI Based MXI-2 Windows 9x (version 2.0).
2. Select **Start | Programs | NiVXI | T&M Explorer**.

   The **T&M Explorer** main screen is displayed.
3. In **System** view, right-click on **PCI-MXI-2** and select **Hardware Configuration**.

   The **Settings for PCI-MXI-2** dialog box is displayed.
4. Click the **PCI** tab.
5. In the **User window size** field, select **8 MB**.
6. Click **OK**.
7. Reboot your computer.

Verifying User Window Size for Windows NT/2000/XP

To verify user window size for Windows NT/2000/XP:

1. Install NI-VXI_VISA Tools for PCI Based MXI-2 for Windows NT/2000/XP (version 3.3).
2. Select **Start | Programs | National Instruments | Measurements & Automation**.

   The **Measurements & Automation Explorer** main screen is displayed.
3. Under **Configuration**, double-click **Devices and Interfaces**.

   All devices and interfaces are displayed.
4. Right-click on **VXI Systems 0 (PCI-MXI-2)**, and select **Hardware Configuration**.

   The **Settings for PCI-MXI-2** dialog box is displayed.
5. Click the **PCI** tab.
6. In the **User window size** field, select **8 MB**.
7. Click **OK**.
8. Reboot your Computer.

Viewing Global Module Information Registers (for Windows 2000/XP)

To view the Global Module Information registers on a VME/VXI board using National Instruments **Measurements & Automation Explorer** utility (for Windows 2000/XP):

To view a Global Module Information register:

1. Select **Start | Programs | National Instruments | Measurements & Automation**.

   The **Measurements & Automation Explorer** main screen is displayed.

2. Select **Tools | NI-VISA | VISA Interactive Control**.

   The **VISA Interactive Control** dialog box is displayed.

3. Select the **View by Connection** option button.

4. Find the Excalibur VME/VXI board in the list. You can identify the board by its device number, which is defined by the DIP switch settings on the board.

5. Double-click the Excalibur board.

   A new dialog box is displayed, with three tabs (**Template, Basic IO, Register IO**) and several sub-tabs. This dialog box enables you to access the board, read from and write to the A16 & A24/32 spaces.

6. Select the **Register IO** tab, then select the **viMapAddress** sub-tab.

7. Under **Address Space**, select **VI_A16_SPACE**.

8. Click **Execute**.

   In the **Map Address** field, an address is displayed. This address points to the beginning of the Global Registers area. Make a note of this address. This address can be used in other functions (viPeek, viPoke).

9. Click the **viPeek** sub-tab. Make sure the address in the **Map Address** field is the same as the address displayed on the **viMapAddress** sub-tab.

10. Under **Width**, select **16-bits**.

11. To view the data value in any Global Module Information register, add a hex value to the address displayed in the **Map Address** field.

    For example, if the starting address of the Global Registers area is 1232000, add 32 to view the data value in the Module 1 Information area. To view its data value, type 1230032 in the **Map Address** field.

    For information on the hex values of the Global Module Information registers, see the section on Board Global Registers in the *EXC-4000VME/VXI User's Manual*.

12. Click **Execute**.

    The value at this address is displayed in the **Data Value** field.

Multiple Board Support for VME/VXI Boards

Support for the use of multiple boards is implemented via the module specific Init_Module function. See the *Programmer's Reference* for your module.

Installation Instructions for PMC Boards

This section applies to the following boards:

- *EXC-1553[cc]PMC/Px*
- *EXC-1553[cc]PMC/MCH*
- *DAS-429[cc]PMC/RTx[D]*
- *EXC-708ccPMC*

Warning: *Whenever handling an Excalibur board, make sure to wear a suitably grounded electrostatic discharge (ESD) wrist strap.*

Assigning a Unique ID to the Board

Each board must be assigned a Unique ID (or 'Selected ID') by setting jumpers JP1–JP4, which correspond to bits 00–03 of the **Board Identification Register**.

- Jumper shorted = logic 0 at bit position
- Jumper open = logic 1 at bit position

The factory default setting for these jumpers is shorted, for a Unique ID (or 'Selected ID') of 0.

The following table shows which jumper represents each Selected ID bit:

EXC-1553[cc]PMC/Px		*EXC-1553[cc]PMC/MCH*		*DAS-429[cc]PMC/RTx[D], EXC-708ccPMC*	
Jumper	**Selected ID Bit**	**Jumper**	**Selected ID Bit**	**Jumper**	**Selected ID Bit**
JP163	0	**JR36**	0	**JP1**	0
JP162	1	**JR33**	1	**JP2**	1
–	2	**JR30**	2	**JP3**	2
–	3	**JR27**	3	**JP4**	3

Set the bits as follows:

For Unique ID #: (Selected ID #:)	**Set the Bits as Follows:**			
	Selected ID Bit #3	**Selected ID Bit #2**	**Selected ID Bit #1**	**Selected ID Bit #0**
0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
• • •				
15	1	1	1	1

Installing a PMC Board on a [c]PCI Carrier Board

When installing a PMC Board on a [c]PCI carrier board, after setting the Unique ID jumpers and installing the PMC Board on the [c]PCI carrier board, the rest of the installation is the same as a PCI[e] carrier board. See **Installation Instructions for PCI[e] Boards, Express Cards and PCMCIA Cards** on page 4.

Installing a PMC Board on a VME Carrier Board under VxWorks

Installation of the PMC board on a VxWorks system is accomplished by determining the board's Unique ID (or 'Selected ID') jumper settings, plugging the PMC board into its VME carrier board, then into the VME chassis. After installing the *Software Tools* on the VxWorks Windows host machine, download the drivers to the VxWorks target. To verify board installation, run the test programs that are included in the *Software Tools* package.

Downloading the Software Tools

Download the driver functions first. They are located in the installed Workspace, under the Project whose title is the product name. Other Projects include programs that can be used to test the card installation and serve as user applications in various modes operation, and the Phex Project – a debug that displays the memory of the card and the configuration registers.

Note: The *Software Tools* for PMC boards were written on WindRiver Tornado Version 2.2.1/VxWorks 5.5.1. They are for use with the MVME6100 Carrier Board or Radstone PowerPC. (See documentation for the specific board or module.)

Troubleshooting

Software Installation Issues

This section contains troubleshooting information for software installation from the *Excalibur Installation CD*.

- If the Excalibur webpage does not open automatically when you insert the *Excalibur Installation CD* into the CD drive, double-click the CD drive in My Computer, then double-click **`setup.exe`**.
- When the Setup program starts, you may be advised by Setup: "Do you want to install and run **`setup.exe`**? The publisher cannot be determined due to the problems below: Authenticode signature not found." The Excalibur CD is made in-house, and is virus free, so there is no risk in running the Setup program. Click **Yes**, to proceed with setup.
- When running the installation the first time, you may get a message that the system is installing items such as Windows Messaging, and that the system must now reboot before continuing. This is normal, depending on the current setup of your system. The installation will proceed after rebooting.
- If you selected MerlinPlus or MerlinMCH, at the end of the installation of the selected *Software Tools*, the installation wizard will install the Merlin product. Upon completion of the Merlin installation, select the checkbox to Launch the program file. Follow the on-screen instructions:
  - During Merlin installation, the Borland Database Engine (BDE) is installed, and a configuration file for Merlin is set up. At the end of this screen text, press any key, and the BDE Administrator will run. Select **Object | Open Configuration** from the menu.
  - Select the file **`C:\Program Files\Excalibur\Merlin\merlin.cfg`**. Close the BDE Administrator, and answer **Yes** to the question "Use C:\...\merlin.cfg as default configuration?"
  - See the file **`readme.txt`** (in the MerlinPlus or MerlinMCH folder) for other troubleshooting tips.
- If you receive a system error message "Unknown database, Alias: DevDB_BDE" when you first run a Merlin application, the correct configuration file was not selected in BDE Administrator. Select **Control Panel | BDE Administrator | Object | Open Configuration | merlin.cfg** from the Merlin folder (**`C:\Program Files\Excalibur\Merlin`**), or from the BDE folder (**`C:\Program Files\Common Files\Borland Shared\BDE`**). Exit the BDE Administrator and save this as your default configuration.
- Errors 2711, -1603, 1309: The folder structure for all VxWorks products has been changed. Therefore, when installing any *Software Tools* with a CD newer than your original installation, the error reports Error 2711, Error -1603 and Error 1309 may occur. Solution:
  - Write down the Excalibur products installed on your computer.
  - Run the **Excalibur Installation Wizard**. See **Installing the Software Tools** on page 6.
  - Select **Remove**. This removes all unmodified Excalibur files from your system. New and modified files remain, and are unaffected.

- Run the **Excalibur Installation Wizard** again, and select the specific products you want to install.

General Troubleshooting

- Check the DIP switch or jumper settings (if any).
- Check that you have installed the board properly for your operating system, as described in **Installation Instructions for PCI[e] Boards, Express Cards and PCMCIA Cards** on page 4 or **Installation Instructions for VME/VXI Boards on PCI-MXI-2 Systems** on page 9.
- Run a demo program to test if the board is working, as described in **Running a Test Program** on page 8.

Contacting Technical Support

Excalibur Systems is ready to assist you with any technical questions you may have. For technical support, see the Technical Support section of our website: www.mil-1553.com. You can also contact us by phone. To find the location nearest you, see the Contact section of our website.

When contacting Technical Support, please provide the following, to help us provide you with a quick and accurate solution.

Provide the following information with your support request:

- The exact board name as found on the white strip on the back of the board.
- The board/module serial numbers (if any).
- The operating system are you using.
- The name of the *Software Tools* installed and the revision number. Check **`RevisionHistory.txt`** or **`readme.rev`**, in the installation folder, or in Explorer, right-click the dll name and select **Properties | Version** tab.
- The revision number of the hardware drivers. Search for the files **`exc2000.sys`** and **`frontdesk.dll`** for Windows 2000/XP; **`excalbr.vxd`** for Windows 9x/ME; or **`excalbr.sys`** for Windows NT. Right-click on the file (or files), and select **Properties | Version** tab.

Send the following files to Technical Support:

- Log Files – (Log Files are not required for VME/VXI boards.)
  Run **ExcConfig** and select the Debug checkbox. Click **Save** and reboot the system. Then run one of the demo programs, and search for the file **`excalbr.log`**. It may be in the windows folder or the system subfolder. For Windows 2000/XP, also send us the file **`frontdesk.log`** or **`ExcFrontDesk.log`**.
- Screen Captures of Installed Devices – Select **Start | Settings | Control Panel | System | Hardware | Device Manager**. Click on the plus sign (+) to show all the Excalibur devices installed. Press **Alt+PrintScreen** to capture the screen. Paste the screen capture into Microsoft Word or save as a graphic in any graphics program. Double-click each Excalibur device to display their properties, and take screen captures of each one. These screen captures enable Technical Support to determine whether the hardware is set up properly. Note that each Excalibur device should have a gray colored diamond shape next to it. If any Excalibur device has a yellow question mark (?) or exclamation mark (!)

next to it, the driver is not installed properly. Try reinstalling the drivers for the board.

- Showhex files –
  - Select **Start | Programs | Excalibur | Showhex Memory Display Utility**, or **Programs | Software Tools | Showhex Memory Display Utility**. (Alternatively, you can run Showhex from the Showhex or Debug folder in the software installation folder.)
  - Select the device number as assigned in **ExcConfig**, and a module number.
  - Select **File | Save All Modules to File** or for each module select **File | Save to File**. When saving each module separately, do this for each module on the board. For PCI[e] boards, also save module 4, the Global Register Bank).

  Showhex files provide a snapshot of the memory on the board (including received messages and messages set up for transmission). These files are helpful in cases when the board does not work or is not working properly.

The information contained in this document is believed to be accurate. However, no responsibility is assumed by Excalibur Systems, Inc. for its use and no license or rights are granted by implication or otherwise in connection therewith. Specifications are subject to change without notice.

October 2009, Rev A-1